

<110> Roche Diagnostic Operations, Inc.

<120> Optimised Protein Synthesis

<130> 21556

<140> PCT/EP03/013964

<141> 2003-12-09

<160> 57

<170> PatentIn Ver. 2.1

<210> 1

<211> 84

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer C

<400> 1

gaaattaata cgactcacta tagggagacc acaacgggtt ccctctagaa ataattttgt 60
ttaactttaa gaaggagata tacc 84

<210> 2

<211> 71

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer D

<400> 2

caaaaaaacc ctcaagacc gtttagaggc cccaaggggg gccgccagtg tgctgaattc 60
gccttttatt a 71

<210> 3

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A
without hairpinloop

<400> 3

aggagatata ccatgactag caaaggagaa 30

<210> 4

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A
Stem Length 4 bp

<400> 4

aggagatata ccatgactaa ttttagtact agcaaaggag aa 42

<210> 5

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<211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer A
 Stem Length 5 bp

<400> 5
 aggagatata ccatgactgt ttatacagta actagcaaag gagaa

45

<210> 6
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer A
 Stem Length 6 bp

<400> 6
 aggagatata ccatgactgg tcaattacca gtaactagca aaggagaa

48

<210> 7
 <211> 51
 <212> DNA
 <213> Artificial Sequence

<220>
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 Stem Length 7 bp

<400> 7
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51

<210> 8
 <211> 51
 <212> DNA
 <213> Artificial Sequence

<220>
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 Stem Length 8 bp

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51

<210> 9
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer B

<400> 9
 attcgccttt tattaatgat gatgatgatg

30

<210> 10
 <211> 60
 <212> DNA
 <213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence:Primer A

<400> 10
aggagatata ccatgactag cactgcacgt gcatcgtgca gtgtaaaagg agaagaactt 60

<210> 11
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A

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aggagatata ccatgactag caaaactgca cgtgcatcgt gcagtgtagg agaagaactt 60
ttc 63

<210> 12
<211> 66
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A

<400> 12
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ttcact 66

<210> 13
<211> 69
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<220>
<223> Description of Artificial Sequence:Primer A

<400> 13
aggagatata ccatgactag caaaggagaa actgcacgtg catcgtgcag tgtagaactt 60
ttcactgga 69

<210> 14
<211> 72
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A

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ttcactggag tt 72

<210> 15
<211> 75
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A

<400> 15

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aggagatata ccatgactt aaggagaa gaacttactg cacgtgcatc gtgcagtc 60
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<210> 16
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer D

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ttagtttatt a 71

<210> 17
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A Variant

<400> 17
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<210> 18
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A Variant

<400> 18
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<210> 19
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A Variant

<400> 19
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<210> 20
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A Variant

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<210> 21
<211> 60
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A Variant

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<210> 22

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A Variant

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<210> 23

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A Variant

<400> 23

aggagatata ccatgaaata ttcataata ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 24

<211> 60

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Primer A Variant

<400> 24

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<210> 25

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A Variant

<400> 25

aggagatata ccatgcatca tcatcatcat ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 26

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer Wildtype

<400> 26

aggagatata ccatggctaa caccgcg

27

<210> 27
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer B

<400> 27
 aggattagtt tattaatgat gatgatgatg atggcgccgg gtgcgcga 48

<210> 28
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer A Variant

<400> 28
 aggagatata ccatgaaata tacatattct ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 29
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer A Variant

<400> 29
 aggagatata ccatgaaaac atattattct ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 30
 <211> 60
 <212> DNA
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<220>
 <223> Description of Artificial Sequence:Primer A Variant

<400> 30
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<210> 31
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer A Variant

<400> 31
 aggagatata ccatgaaata ttattctata ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 32
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer A Variant

<400> 32
aggagatata ccatgaaata tacatattca ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 33
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A Variant

<400> 33
aggagatata ccatgaaaac atattattca ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 34
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A Variant

<400> 34
aggagatata ccatgaaata ttcatatata ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 35
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A Variant

<400> 35
aggagatata ccatgaaata ttattcaaca ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 36
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A Variant

<400> 36
aggagatata ccatgcatca tcatcatcat ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 37
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A
Wildtype

<400> 37
aggagatata ccatgggtgc cccgacg

27

<210> 38
<211> 49
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer B

<400> 38

aggattagtt tattaatgat gatgatgatg atgatccatg gcagccagc 49

<210> 39

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 39

aggagatata ccatgaaata tacatattct ctgcacgtga tcgtgcagga gttggggccc 60

<210> 40

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 40

aggagatata ccatgaaaac atattattct ctgcacgtga tcgtgcagga gttggggccc 60

<210> 41

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 41

aggagatata ccatgaaata ttcttataca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 42

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 42

aggagatata ccatgaaata ttattctaca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 43

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 43

aggagatata ccatgaaata tacatattca ctgcacgtga tcgtgcagga gttggggccc 60


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<210> 44
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer

<400> 44
aggagatata ccatgaaaac atattattca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 45
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer

<400> 45
aggagatata ccatgaaata ttcatatata ctgcacgtga tcgtgcagga gttggggccc 60

<210> 46
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer

<400> 46
aggagatata ccatgaaata ttattcaaca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 47
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer

<400> 47
aggagatata ccatgcatca tcatcatcat ctgcacgtga tcgtgcagga gttggggccc 60

<210> 48
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer A
      Wildtype

<400> 48
aggagatata ccatggagtt ggggccc

<210> 49
<211> 45
<212> DNA
<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence:Primer B

<400> 49

aggattagtt tattattaat gatgatgatg atgatgagaa ccccc

45

<210> 50

<211> 431

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

Expression construct for mutant 1

<400> 50

gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60
 ttaactttta gaaggagata taccatgaaa tatacatatt ctctgcacgt gatcgtgcag 120
 gctaacaccg cgccgggacc cacggtggcc aacaagcggg acgaaaaaca ccgtcacgtc 180
 gttaacgtcg ttttgagct gccgaccgag atatcagagg ccaccaccc ggtgttgcc 240
 accatgctga gcaagtacac gcgcatgtcc agcctgttta atgacaagt cgcctttaag 300
 ctggacctgt tgcgcatggt agccgtgtcg cgcaccggc gccatcatca tcatcatcat 360
 taataaacta atccttaaca ttctactccc aacccttg ggcctctaaa cgggtcttga 420
 ggggtttttt g 431

<210> 51

<211> 398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

Expression construct for wildtype

<400> 51

gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60
 ttaactttta gaaggagata taccatggct aacaccgcgc cgggaccac ggtggccaac 120
 aagcgggacg aaaaacaccg tcacgtcggt aacgtcggtt tggagctgcc gaccgagata 180
 tcagaggcca cccaccgggt gttggccacc atgctgagca agtacacgcg catgtccagc 240
 ctgtttaatg acaagtgcgc ctttaagctg gacctgttgc gcattgtagc cgtgtcgcgc 300
 acccgcgccc atcatcatca tcatcattaa taaactaatc cttaacattc tactcccaac 360
 cccttggggc ctctaaacgg gtcttgaggg gttttttg 398

<210> 52

<211> 632

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

Expression construct for mutant 1

<400> 52

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 ttaactttta gaaggagata taccatgaaa tatacatatt ctctgcacgt gatcgtgcag 120
 ggtgccccga cggtgcccc tgcttggcag ccctttctca aggaccaccg catctctaca 180
 ttcaagaact ggcccttctt ggagggtgc gcctgcaccc cggagcggat ggccgaggct 240
 ggcttcatcc actgccccac tgagaacgag ccagacttgg ccagtggtt cttctgcttc 300
 aaggagctgg aaggctggga gccagatgac gaccccatag aggaacataa aaagcattcg 360
 tccggttgcg ctttctttt tgtcaagaag cagtttgaag aattaaccct tggatgaatt 420
 ttgaaactgg acagagaaag agccaagaac aaaattgcaa aggaaaccaa caataagaag 480
 aaagaatttg aggaaactgc gaagaaagt gcgcgtgcca tcgagcagct ggctgccatg 540
 gatcatcatc atcatcatca ttaataaact aatccttaac attctactcc caacccttg 600
 gggcctctaa acgggtcttg aggggttttt tg 632

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<210> 53
<211> 599
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Expression construct for Wildtype

<400> 53
gaaattaata cgactcacta tagggagacc acaacgggtt ccctctagaa ataattttgt 60
ttaactttta gaaggagata taccatgggt gcccgacgt tgccccctgc ctggcagccc 120
tttctcaagg accaccgcat ctctacattc aagaactggc ctttcttgga gggctgcgcc 180
tgcaccccg agcggtatggc cgaggctggc ttcattccact gcccactga gaacgagcca 240
gacttggccc agtggtttctt ctgcttcaag gagctggaag gctgggagcc agatgacgac 300
cccatagagg aacataaaaa gcattcgctc ggttgcgctt tcctttctgt caagaagcag 360
tttgaagaat taacccttgg tgaatttttg aaactggaca gagaaagagc caagaacaaa 420
attgcaagg aaaccaacaa taagaagaaa gaatttgagg aaactgcgaa gaaagtgcgc 480
cgtgccatcg agcagctggc tgccatggat catcatcatc atcatcatta ataaactaat 540
ccttaacatt ctactcccaa ccccttgggg cctctaaacg ggtcttgagg ggttttttg 599

<210> 54
<211> 1400
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Expression construct for mutant 1

<400> 54
gaaattaata cgactcacta tagggagacc acaacgggtt ccctctagaa ataattttgt 60
ttaactttta gaaggagata taccatgaaa tatacatatt ctctgcacgt gatcgtgcag 120
gagttggggc ccctagaagg tggtacctg gagcttctta acagcgatgc tgacccctg 180
tgcccttacc acttctatga ccagatggac ctggctggag aagaagagat tgagctctac 240
tcagaacccg acacagacac catcaactgc gaccagtca gcaggctgtt gtgtgacatg 300
gaaggtgatg aagagaccag ggaggcttat gccaatatcg cggaaactgga ccagtatgtc 360
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gaagtgatcg gtgagatgat ggagatgcca gcagaagttg ggcagaaaag tcagaaaaga 480
cccttcccag aggagcttcc ggcagacctg aagcactgga agccagctga gccccccact 540
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ccactgctg cgctgttcaa ccaggagcca gcctccggcc agatgcgcct ggagaaaacc 660
gaccagattc ccattgcctt ctccagttcc tcggtgagct gcctgaatct ccctgaggga 720
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gagcaccggc ggccgcgtcg actcgagcga gctcccgagg ggggttctca tcatcatcat 1320
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<210> 55
<211> 1367
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Expression construct for wildtype

<400> 55

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gaaattaata cgactcaaggaggagacc acaacgggttt ccctctagaa ataattt 60
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cttcttaaca gcgatgctga cccctgtgct ctctaccact tctatgacca gatggacctg 180
gctggagaag aagagattga gctctactca gaacccgaca cagacaccat caactgagac 240
cagttcagca ggctgtgtgt tgacatggaa ggtgatgaag agaccagggg ggcttatgcc 300
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gacattttca agcacatagg accagatgaa gtgatcggtg agagtatgga gatgccagca 420
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<210> 56
 <211> 938
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence:Expression construct

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<400> 56
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actagcaaaag gagaagaact ttctactgga gttgtcccaa ttcttggtga attagatggg 180
gatgttaatg ggcacaaatt ttctgtcagt ggagaggggtg aaggtgatgc tacatacgga 240
aagcttacc tttaaatttat ttgcactact ggaaaactac ctgttccatg gccaacactt 300
gtcactactt tctcttatgg tgttcaatgc ttttcccgtt atccggatca tatgaaacgg 360
catgactttt tcaagagtgc catgcccga ggttatgtac aggaacgcac tatactcttc 420
aaagatgacg ggaactacaa gacgcgtgct gaagtcaagt ttgaagggtga tacccttgtt 480
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atcaaagcta acttcaaaat tcgccacaac attgaagatg gatccgttca actagcagac 660
cattatcaac aaaataactcc aattggcgat ggccctgtcc ttttaccaga caaccattac 720
ctgtcgacac aatctgccc ttcgaaagat cccaacgaaa agagagacca catgggtcctt 780
cttgagtttg taacagctgc tgggattaca catggcatgg atgaactata caaaccggg 840
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<210> 57
 <211> 905
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Expression construct

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<400> 57
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gtcccaattc ttgttgatg agatgggtgat gttaatgggc acaaattttc tgtcagtgga 180
gaggggtgaag gtgatgctac atacggaaag ctaccctta aatttatgtt cactactgga 240
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SEQUENCE LISTING.txt

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tcccgttatc cggatcat aacggcat gactttttca agagtgccat gcccgaa 60
tatgtacagg aacgcacta cttttcaaa gatgacggga actacaagac gcgtgctgaa 420
gtcaagtttg aagggtgatac ccttgттаат cgtatcgagt taaaagggtat tgatttttaa 480
gaagatggaa acattctcgg acacaaactc gagtacaact ataactcaca caatgtatac 540
atcacggcag acaaacaaaa gaatggaatc aaagctaact tcaaaattcg ccacaacatt 600
gaagatggat ccgttcaact agcagaccat tatcaacaaa atactccaat tggcgatggc 660
cctgtccttt taccagacaa ccattacctg tcgacacaat ctgccctttc gaaagatccc 720
aacgaaaaga gagaccacat ggtccttctt gagtttgtaa cagctgctgg gattacacat 780
ggcatggatg aactatacaa acccgggggg ggttctcatc atcatcatca tcattaataa 840
actaatcctt aacattctac tcccaacccc ttggggcctc taaacggggtc ttgagggggt 900
ttttg 905

```